



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx FTZU 10.0009X

Issue No: 3

Certificate history:

Issue No. 3 (2018-09-14)

Issue No. 2 (2015-06-29)

Issue No. 1 (2012-12-31)

Issue No. 0 (2010-04-06)

Status: **Current**

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Date of Issue: **2018-09-14**

Applicant: **Elok - Opava s.r.o.**
Sádek 17
747 75 Velké Heraltice
Czech Republic

Equipment: **The Landfill Gas Monitor type GasClam**

Optional accessory:

Type of Protection: **Flameproof enclosure, Intrinsic safety**

Marking:
Ex db ib [ib] IIB T4 Gb

*Approved for issue on behalf of the IECEx
Certification Body:*

Dipl. Ing. Lukáš Martinák

Position:

Head of Certification Body

*Signature:
(for printed version)*

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**Fyzikálně technický zkusební ústav
(Physical -Technical Testing Institute)
Pikartská 7, 71607 Ostrava - Radvanice
Czech Republic**





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Manufacturer: **Elok - Opava s.r.o.**
Sádek 17
747 75 Velké Heraltice
Czech Republic

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-1 : 2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[CZ/FTZU/ExTR10.0009/00](#)
[CZ/FTZU/ExTR10.0009/03](#)

[CZ/FTZU/ExTR10.0009/01](#)

[CZ/FTZU/ExTR10.0009/02](#)

Quality Assessment Report:

[CZ/FTZU/QAR07.0002/06](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Landfill Gas Monitor is used for the monitoring gas from bore holes in land. The gas monitor is installed in the housing made from stainless steel. There is the battery pack in the flameproof housing in the upper part of housing. There is the measuring unit with five gas sensors in the intrinsically safe part in lower part of housing. There are the valves, the pump with the filter on the bottom of the housing.

Technical parameters:

$U_n = 3.12$ V DC, $P_n = 1.5$ W;

Degree of protection: IP 68 for flameproof enclosure part, IP20 for a intrinsically safe part

Intrinsically safe parameters:

Maximal input/output parameters:

Water level connector: $U_o = 16.8$ V, $I_o = 0.129$ A, $P_o = 0.54$ W, $L_o = 0.3$ mH, $C_o = 1$ μ F;

Communication connector:

Status LED: $U_o = 6.58$ V, $I_o = 0.018$ A, $P_o = 0.03$ W, $L_o = 0.3$ mH, $C_o = 1$ μ F;

PC RxD a PC TxD: $U_o = 6.58$ V, $I_o = 0.018$ A, $P_o = 0.03$ W, $L_o = 0.3$ mH, $C_o = 1$ μ F;

PC RxD: $U_i = 15.8$ V, $L_i = 1$ μ H, $C_i = 0.6$ μ F;

Water proximity detector: $U_o = 6.58$ V, $I_o = 0.003$ A, $P_o = 0.005$ W; $C_o = 450$ μ F, $L_o = 10$ mH;

Output for connection - communication connector: PC RxD a PC TxD: $U_m = 15.8$ V;

External power supply with this parameters: $U_i = 15.8$ V, $I_i = 0.66$ A, $P_i = 10.43$ W, $L_i = 0$ μ H, $C_i = 0$ μ F;

SPECIFIC CONDITIONS OF USE: YES as shown below:

- 1) Tamb: -20°C to +50°C supply voltage 2 x 1.5 V alkaline battery Duracell Ultra M3 MN 1300, Li72-170F, Li72-190F.
- 2) Tamb: -10°C to +40°C supply voltage 2 x 1.2 V accumulator Saft D 9500.
- 3) Batteries or accumulators can be changed only in non explosive atmosphere.
- 4) Download of measured data can be carried out only with explosion proof device with correspond input/output parameters or with unit out of hazardous atmosphere.
- 5) Battery must be removed before connecting external power.
- 6) Verified values of the maximum gaps and minimum constructional length of flameproof joints of this enclosure are different from relevant minimum and maximum values mentioned in standard. To obtain information about joints dimension it is necessary to contact the manufacturer.
- 7) For the assembly of the parts of flame proof enclosure fasteners with a minimum property class 8.8 shall be used.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 3:

- 1) There were made modifications of intrinsically safe circuits and parameters.
- 2) The Ex marking was updated in accordance with used standards.
- 3) Evaluation according to standard IEC 60079-1:2014 (Ed.7).